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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/536,736	05/27/2005	Louis Dubertret	P08652US00/BAS	4693
881 7590 04/02/2008 STITES & HARBISON PLLC 1199 NORTH FAIRFAX STREET SUITE 900 ALEXANDRIA, VA 22314			EXAMINER KARPINSKI, LUKE E	
			ART UNIT 1616	PAPER NUMBER
			MAIL DATE 04/02/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/536,736

**Applicant(s)**

DUBERTRET ET AL.

**Examiner**

LUKE E. KARPINSKI

**Art Unit**

1616

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 and 19-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 and 19-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

### **DETAILED ACTION**

Receipt of Amendments to the claims and Applicants remarks filed on 1/10/2008 is acknowledged.

Claims 1-17 and 19-25 are currently pending.

Claim 18 has been canceled by the Applicant.

#### ***Withdrawn Claim Rejections – 35 USC §103***

The rejection of claims 1-25 under 35 USC §103, as being unpatentable over US Patent No. 5,417,961 to Nearn et al. in view of US Patent No. 6,319,426 to Bawendi et al. is hereby withdrawn in light of Applicants arguments filed 1/10/2008.

#### ***Response to Arguments Concerning 102 Rejection***

Applicant's arguments pertaining to the 102 rejection filed 1/10/2008 have been fully considered but they are not persuasive. The Applicant argues that Nearn et al. do not disclose a fluorescent nanoparticle of a size which anticipates the Applicant's claims. The Applicant also argues that the composition of Nearn et al. is a sunscreen composition and not a make-up composition, and that the zinc oxide particles are used as a sunscreen and not as a pigment.

Applicant's arguments are not persuasive because zinc oxide is a known fluorescent nanoparticle as evidenced by Brooks (paragraph 9). Nearn et al. disclose zinc oxide particles from 0.01 to 0.25 microns which converts to 10 to 250 nanometers

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and reads on the Applicants claim of a size from 5-45 nanometers (nm). Regarding the recitation "make-up", this recitation is an intended use. The intended use of said composition is only given weight if said use results in a structural difference between the claimed invention and the prior art. The intended use recited by the Applicant imparts no such difference and therefore is given no patentable weight. Regarding applicant's argument that zinc oxide is used as a pigment, the examiner points out that ZnO is still a fluorescent semiconductor nanoparticle.

***Response to Arguments Concerning 103 Rejection***

Applicant's arguments pertaining to the 103 rejection with respect to claims 1-25 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1-6 and 22-25 are rejected under 35 U.S.C. 102(b)** as being anticipated by US Patent No. 5,417,961 to Nearn et al.

Nearn et al. disclose a cosmetic composition comprising: zinc oxide, a continuous hydrophobic phase and, a continuous hydrophilic phase within a cosmetic

vehicle, wherein the cosmetic vehicle is a w/o emulsion, wherein the zinc oxide is dispensed in the hydrophobic phase of the cosmetic vehicle (abstract), and wherein the composition is characterized in that it is a cream (col. 2, lines 25-27).

The instant application claims a make-up composition and Nearn et al. claim a sunscreen composition; these compositions are seen to read on each other because both compositions comprise the same components and are both cosmetic compositions, therefore there is seen to be no difference between the two compositions. The fluorescent semiconductor nanoparticle taught by Nearn et al is ZnO (zinc oxide), as disclosed in claim 15 of the instant application. The aqueous phase reads on a hydrophilic phase and the organic phase reads on a hydrophobic phase.

Regarding claims 22-24 the different characterizations of the composition is seen as intended uses without any specific components to structurally define the claims. The intended use of said composition is given weight only if said use results in a structural difference between the claimed invention and the prior art. The intended use recited by the Applicant imparts no such difference and therefore is given no patentable weight.

Concerning claim 25 and the method of preparing a composition according to claim 1, Nearn et al. disclose the nanoparticles being introduced into an oil phase and as aqueous phase (col.2, lines 24-31).

**Claims 1, 3, 7-17 and 19-25 are rejected under 35 U.S.C. 102(b)** as being anticipated by US Patent No. 6,319,426 to Bawendi et al.

Bawendi et al. disclose a composition comprising fluorescent semiconductor nanoparticles in a cosmetic vehicle (water) (col. 22, example 4).

Regarding claims 3 and 7, Bawendi et al. disclose the nanoparticles in both a hydrophilic phase and a hydrophobic phase (hexane and water) (col. 22, example 4). It is noted by the examiner that Hexane and water are a cosmetic vehicle.

Regarding claims 8-10, 14, and 15 and the limitation of the composition of the semiconductor, Bawendi et al. disclose PbS and ZnS as a core material, GaAs as a shell material (col. 11, lines 56-65 and col. 12, lines 33-39).

Regarding claims 13 and 16 and the limitations of a core/shell structure and a shell layer thickness, Bawendi et al. disclose a core/shell structure and a shell layer thickness (col. 12, lines 15-16 and 49-50).

Regarding claims 11 and 12 and the limitation of a mixture of semiconductors, Bawendi et al. disclose a mixture of CdSe and CdS (col. 12, lines 33-39).

Regarding claim 17, Bawendi et al. disclose fluorescent nanoparticles coated with a hydrophobic ligand and complexed into a micelle, the micelle being formed from a plurality of hydrophobic groups (hydrophobic core) and a plurality of hydrophilic groups (hydrophilic envelope), wherein each hydrophobic group contains at least one chain (figure 1). Bawendi et al. also discloses that the hydrophobic chains comprise at least 8 carbon atoms (col. 14, lines 53-56) and the number of carbon atoms for all of the hydrophobic chains of a single group being greater than 24 (figure 1).

Regarding claims 19-21 and the limitations of specific hydrophilic groups, Bawendi et al. disclose the hydrophilic molecule as a sugar block copolymer and as

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polyethylene glycol (col. 6, lines 7-44). Bawendi et al. state that "sugar" includes polysaccharides (col. 9, line 64 to col. 10, line 16).

Regarding claims 22-24 the different characterizations of the composition is seen as intended uses without any specific components to structurally define the claims. The intended use of said composition is given weight only if said use results in a structural difference between the claimed invention and the prior art. The intended use recited by the Applicant imparts no such difference and therefore is given no patentable weight.

Regarding claim 25 and the method of preparing a composition according to claim 1, Bawendi et al. disclose the nanoparticles introduced into water (col. 22, example 4).

### ***Conclusion***

Claims 1-17 and 19-25 are currently pending.

Claim 18 has been canceled by the Applicant.

Claims 1-17 and 19-25 are rejected.

No claims are allowed.

### ***Inquiries***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LUKE E. KARPINSKI whose telephone number is (571)270-3501. The examiner can normally be reached on Monday Thursday 9-4 est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann R. Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LEK

/Sharmila Gollamudi Landau/

Primary Examiner, Art Unit 1611